UNITED STATES PATENT AND TRADEMARK OFFICE

AS

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,548	12/26/2001	Tsuneo Yashiki	ZU-319/CONT	1823

7590 04/08/2002

SHERMAN & SHALLOWAY
413 North Washington Steet
Alexandria, VA 22314

EXAMINER
LU, C CAIXIA

ART UNIT	PAPER NUMBER
1713	2

DATE MAILED: 04/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

T-D-2

Office Action Summary	Application No.	Applicant(s)	
	10/025,548	YASHIKI ET AL.	
	Examiner	Art Unit	
	Caixia Lu	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *08/651,492* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 2 and 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 2, page 46, line 25 to page 47, line 6, the limitations regarding the addition of organosilicon (c) and temperature are confusing because of the following:

(a) as it is written, the description of "wherein the organosilicon compound ... the magnesium compound (a)" refers to the organosilicon (c) in the contact product (i); however, applicants seem to intend to claim the organosilicon (c) as additional component rather than what is already in component (i). The examiner suggest replacing "wherein the" in line 25 with --to which additional--.

(b) The examiner simply can not figure out the temperature limitation here. The applicants are requested to rewrite the temperature limitation "while the temperature of ...after the elevation of the temperature is completed" in plain and straight forward English, so the examiner will be able to understand the contacting temperature limitation of (i) and additional (c).

Claim Rejections - 35 USC § 103

2. The following is a Res Judicata rejection in accordance with the decision of Board of Patent Appeals and Interferences, Paper no. 18, of the parent application, SN 08/651,492. See MPEP 706.03(w). It is noted that Claim 4 is newly added, however, the scope of Claim 4 is not substantially different from Claims 1-3 which have been

before the Board, thus, it is appropriate to include Claim 4 to the following rejection which have been affirmed by the Board.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki (US 4,891,411).

Sasaki discloses all the essential limitations of the instant claims, except that the reference does not have a working example using the claimed Si/Mg molar ratio and the temperature heating range (col. 2, lines 6-15; col. 3, lines 66-68; col. 4, lines 47-49 and 62-64; col. 5, lines 1-5; and Example 1).

Thus, the reference teaches contacting a liquid magnesium compound with a liquid titanium compound (the tetrabutoxy titanium compound used in the working Examples is liquid) in the presence of an organosilicon compound having no active hydrogen in a Si/Mg molar ratio that encompasses the claimed range and then elevating the temperature to a range encompassing the claimed range.

Therefore, it would be obvious to one of ordinary skill in the art to use the claimed Si/Mg ratio and heating temperature in forming the catalyst of the reference because the reference teaches such ratios and heating range and all of the embodiments of the reference are expected to work and in the absence showing of criticality and unexpected results.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kioka (US 4,952,649).

Kioka discloses all the essential limitations of instant claims, except that the reference does not have a working example within the claimed Si/Mg molar ratio and heating temperature range (col. 1, lines 41-63; col. 7, lines 40-42; col. 9, lines 5-11; col. 10, lines 19-35; and Examples 32, 33 and 36).

The catalyst of Example 36 differs from that of Claim 1 in that the Si/Mg ratio was 0.15/1 instead of 0.25/1 to 0.35/1.

However, it would have been obvious to one of ordinary skill in the art to use the claimed Si/Mg ratio in the catalyst of Example 36 because (1) the reference teaches such ratios, (2) ratios of 0.3/1 of reactants (D)/Mg ((D) reactants are certain electron donors including the claimed organosilicon compounds) are disclosed in Examples 32 and 33, and in the absence showing of criticality and unexpected results.

6. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuffiana et al (US 5,278,118).

A1 is cited in 103 rejection
A9 uses $(cH_3O)_2Si(C_6H_5)_2$

Cuffiana discloses all the essential limitations the instant claims, except that the reference does not have a working example coming within the scope of the claims (col. 2, lines 21-24 and 43-50; col. 3, lines 38-40, col. 4, lines 12-30 and 41-43; and Example A1). Thus, the reference teaches converting a magnesium compound such as magnesium dichloride in to a liquid compound by reaction with aluminum ethyldichloride, contacting the solution with a liquid titanium compound (titanium

tetrabutoxide) in the presence of an electron donor which can be the claimed organosilicon compound in Si/Mg ratio of 0.1/1 to 1/1 and heating the resulting mixture at temperatures of 20-200°C, e.g., 60°C in Example A1.

Thus, it would be obvious to one of ordinary skill in the art to use the claimed Si/Mg ratio and heating temperature in preparing catalyst A1 because the reference teaches such ratios and heating range and all of the embodiments of the reference are expected to work and in the absence showing of criticality and unexpected results.

As indicated in the decision of Board of Patent Appeals and Interferences, while the burden of coming forward with unexpected results to rebut a prima facie case of obviousness is on the appellants, applicants have failed to meet that burden. The unexpected results must be established by factual evidence; mere argument or conclusory statements in the specification do not suffice. Geisler, 116 F. 3rd at 1470, 43 USPQ2d at 1365 (quoting In re De Blauwe, 736 F. 2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984)). Furthermore, unexpected results must be established by comparing the claimed invention against the closest prior art. De Blauwe, 736, F. 2d 699, 705, 222 USPQ at 196 ("[A]n applicant relying on comparative tests to rebut a prima facie case of obviousness must compare his claimed invention to the closest prior art."); accord In re Merchant, 575 F. 2d 865, 869, 197 USPQ 785, 788 (CCPA 1978). It is the Board position that applicants have not provided sufficient evidence to rebut the prima facie case of obviousness because (i) the experimental evidence does not include a comparison of the claimed invention against the closest prior art, and (ii) the evidentiary showing is far from being commensurate in scope with the degree of patent protection

sought. In re Kulling, 897 F. 2d 1147, 1149, 14 USPQ 2d 1056m 1058 (Fed. Cir. 1990) (" '[O]bjective evidence of nonobviousness must be commensurate in scope with the claims.' ") (quoting In re Lindner, 457 F. 2d, 506, 508, 173 USPQ 356, 358 (CCPA 1972); In re dill, 604 F. 2d 1356, 1361, 202 USPQ 805, 808 (CCPA 1979) ("The evidence presented to rebut a prima facie case of obviousness must be commensurate in scope with the claims to which it pertains.").

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (703) 306-3434. The examiner can normally be reached on 9:00 a.m. to 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1193.

Caixia Lu (Ph.D.)
Examiner
April 5, 2002